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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/944,341	09/04/2001	Tsuneo Sato	0649-0799P	9771
2292	7590	05/25/2006	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			RICHER, AARON M	
			ART UNIT	PAPER NUMBER
			2628	

DATE MAILED: 05/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/944,341	Applicant(s) SATO ET AL.	
	Examiner Aaron M. Richer	Art Unit 2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 14 recites the limitation "said multidimensional lookup table" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 9-12, and 14-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Bhattacharjya (U.S. Patent 5,809,213).

6. As to claim 9, Bhattacharjya discloses:

a lookup table which is composed of characteristic points which are points indicating the relationship between supplied image data and output image data (col. 5, lines 43-50; a lookup table is generated from "augmented sample points" which

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correspond to “characteristic points”) which are determined to be impossible to be interpolated when a process for converting image data is performed (fig. 2a, col. 10, lines 40-63; points are sampled because many points are impossible to interpolate; similarly some points are non-linearly interpolated because they are impossible to linearly interpolate);

and image data converting means for converting supplied image data by using said lookup table composed of the characteristic points into output image data (col. 5, lines 43-50; a linear interpolation function is used to convert the table value to a calibration values for a color reproduction system).

7. As to claim 10, Bhattacharjya discloses an apparatus further comprising table development means for developing said lookup table into the multidimensional lookup table; wherein said image data converting means uses the multidimensional lookup table developed by said table development means to convert supplied image data into output image data (col. 15, lines 34-38).

8. As to claim 11, Bhattacharjya discloses an apparatus wherein said table development means develops said lookup table into said multidimensional lookup table in such a manner that all of characteristic points of said lookup table composed of the characteristic points are contained (col. 5, lines 43-50; a lookup table is generated from “augmented sample points” which correspond to “characteristic points”).

9. As to claim 12, Bhattacharjya discloses an apparatus wherein said table development means develops said lookup table into the multidimensional lookup table such that data corresponding to grid points of said multidimensional lookup table is

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composed of output data of said lookup table and data of information of adjacent grid points for interpolating a portion between grid points (col. 15, lines 34-38; the 3-D lookup table is formed from the interpolation method described earlier, which involves finding points between lookup table points and adjacent grid points from the lookup table).

10. As to claim 14, Bhattacharjya discloses an apparatus further comprising:

table recording means for recording said multidimensional lookup table developed by said table development means in a memory (col. 15, lines 34-38; col. 8, lines 53-67);

and updating means for operating said table development means and said table recording means when said lookup table composed of the characteristic points has been updated to update said multidimensional lookup table and rewrite the updated multidimensional lookup table on said memory, wherein said image data converting means uses said multidimensional lookup table recorded in said memory to convert supplied image data into output image data (col. 10, lines 19-64; after first sample points are taken, additional sample points are added, the set of both corresponding to the "augmented" set of sample points).

11. As to claims 15 and 16, see the combined rejections of claims 9 and 10.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bhattacharjya (U.S. Patent 5,809,213).

14. As to claim 13, Bhattacharjya discloses an apparatus wherein said image data converting means uses obtained multidimensional lookup table to convert supplied image data into output image data (see rejection to claim 10).

Bhattacharjya does not disclose that said multidimensional lookup table is a compressed multidimensional lookup table formed by compressing said multidimensional lookup table; nor does Bhattacharjya disclose restoring means provided which restores said compressed multidimensional lookup table into said multidimensional lookup table. However, Official notice has been taken of the fact that compressing and restoring a color table is well-known in the art (see MPEP 2144.03). It would have been obvious to one skilled in the art to modify Bhattacharjya to compress and restore a color table in order to conserve space in memory.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with respect to color conversion by interpolation in general:

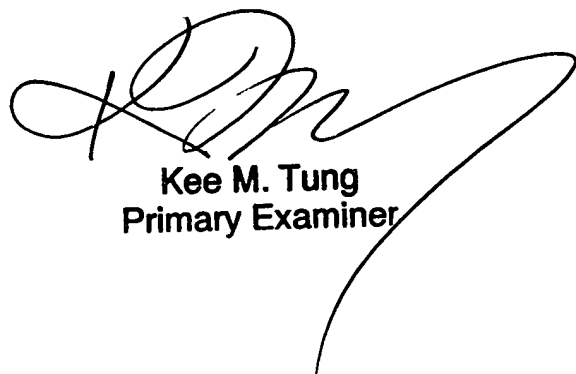
U.S. Patent 5,809,181 to Metcalfe, which describes a method of linear interpolation between certain color characteristic points that are determined to be very important to approximating the conversion.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron M. Richer whose telephone number is (571) 272-7790. The examiner can normally be reached on weekdays from 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on (571) 272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AMR
5/22/06



Kee M. Tung
Primary Examiner